



## SEQUENCE LISTING

<110> Reinherz, Ellis L.  
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Fiorini, Emma  
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<120> IDENTIFICATION OF THE IKBNS PROTEIN AND  
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<141> 2004-02-20

<150> PCT/US02/08288

<151> 2002-03-14

<150> US 60/314,046

<151> 2001-08-22

<150> US 60/322,993

<151> 2001-09-18

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<210> 2

<211> 328

<212> PRT

<213> Homo sapiens

<400> 2

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Met Glu Asp Pro Pro Asp Thr Gln Phe Tyr Val Gly Ser Ser Leu Pro
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Gln Ala Gly Pro Trp Arg Val Ser Ala Pro Pro Ser Gly Pro Pro Gln
 20          25          30
Phe Pro Ala Val Val Pro Gly Pro Ser Leu Glu Val Ala Arg Ala His
 35          40          45
Met Leu Ala Leu Gly Pro Gln Gln Leu Leu Ala Gln Asp Glu Glu Gly
 50          55          60
Asp Thr Leu Leu His Leu Phe Ala Ala Arg Gly Leu Arg Trp Ala Ala
 65          70          75          80
Tyr Ala Ala Ala Glu Val Leu Gln Val Tyr Arg Arg Leu Asp Ile Arg
 85          90          95
Glu His Lys Gly Lys Thr Pro Leu Leu Val Ala Ala Ala Ala Asn Gln
100          105          110
Pro Leu Ile Val Glu Asp Leu Leu Asn Leu Gly Ala Glu Pro Asn Ala
115          120          125
Ala Asp His Gln Gly Arg Ser Val Leu His Val Ala Ala Thr Tyr Gly
130          135          140
Leu Pro Gly Val Leu Leu Ala Val Leu Asn Ser Gly Val Gln Val Asp
145          150          155          160
Leu Glu Ala Arg Asp Phe Glu Gly Leu Thr Pro Leu His Thr Ala Ile
165          170          175
Leu Ala Leu Asn Val Ala Met Arg Pro Ser Asp Leu Cys Pro Arg Val
180          185          190
Leu Ser Thr Gln Ala Arg Asp Arg Leu Asp Cys Val His Met Leu Leu
195          200          205
Gln Met Gly Ala Asn His Thr Ser Gln Glu Ile Lys Ser Asn Lys Thr
210          215          220
Val Leu His Leu Ala Val Gln Ala Ala Asn Pro Thr Leu Val Gln Leu
225          230          235          240
Leu Leu Glu Leu Pro Arg Gly Asp Leu Arg Thr Phe Val Asn Met Lys
245          250          255
Ala His Gly Asn Thr Ala Leu His Met Ala Ala Ala Leu Pro Pro Gly
260          265          270
Pro Ala Gln Glu Ala Ile Val Arg His Leu Leu Ala Ala Gly Ala Asp
275          280          285
Pro Thr Leu Arg Asn Leu Glu Asn Glu Gln Pro Val His Leu Leu Arg
290          295          300
Pro Gly Pro Gly Pro Glu Asp Leu Arg Gln Leu Leu Lys Arg Ser Arg
305          310          315          320
Val Ala Pro Pro Gly Leu Ser Ser
          325

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<210> 3

<211> 2046

<212> DNA  
<213> Unknown

<220>  
<223> mouse

<400> 3

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tagtcactgc ccaacacaga cggtaaagaa gcttctggaa gaacagaggc gccgacagca 180
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<210> 4  
<211> 607  
<212> PRT  
<213> Unknown

<220>  
<223> mouse

<400> 4

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Met Glu Asp Ser Leu Asp Thr Arg Leu Tyr Pro Glu Pro Ser Leu Ser
1           5           10          15
Gln Val Gly Ser Trp Arg Val Ser Ser Leu Pro Ser Gly Ser Pro Gln
20          25          30
Leu Pro Ser Pro Thr Gly Pro Ser Leu Glu Thr Ala Arg Ala His Ile

```

		35					40					45			
Leu	Ala	Leu	Gly	Pro	Gln	Gln	Leu	Leu	Ala	Gln	Met	Glu	Asp	Asp	Thr
	50					55					60				
Tyr	Ser	Leu	Gln	Gly	Trp	Arg	Val	Ser	Pro	Ser	Gly	Pro	Gln	Pro	Gly
65					70					75					80
Pro	Ser	Leu	Glu	Ala	Arg	Ala	His	Leu	Ala	Leu	Gly	Pro	Gln	Gln	Leu
				85					90					95	
Leu	Ala	Gln	Asp	Glu	Glu	Gly	Asp	Thr	Leu	Leu	His	Leu	Phe	Ala	Ala
			100					105					110		
Arg	Gly	Leu	Arg	Trp	Ala	Ala	Tyr	Ala	Ala	Ala	Glu	Val	Leu	Gln	Met
		115					120					125			
Tyr	Arg	Gln	Leu	Asp	Ile	Arg	Glu	His	Lys	Gly	Lys	Thr	Pro	Leu	Leu
	130					135					140				
Val	Ala	Ala	Ala	Ala	Asn	Gln	Pro	Leu	Ile	Val	Glu	Asp	Leu	Leu	Asp
145					150					155					160
Glu	Glu	Gly	Asp	Thr	Leu	Leu	His	Leu	Phe	Ala	Ala	Arg	Gly	Leu	Arg
				165					170					175	
Trp	Ala	Ala	Tyr	Ala	Ala	Ala	Glu	Val	Leu	Gln	Tyr	Arg	Leu	Asp	Ile
			180					185					190		
Arg	Glu	His	Lys	Gly	Lys	Thr	Pro	Leu	Leu	Val	Ala	Ala	Ala	Ala	Asn
		195					200					205			
Gln	Pro	Leu	Ile	Val	Glu	Asp	Leu	Leu	Ser	Leu	Gly	Ala	Glu	Pro	Asn
	210					215					220				
Ala	Thr	Asp	His	Gln	Gly	Arg	Ser	Val	Leu	His	Val	Ala	Ala	Thr	Tyr
225					230					235					240
Gly	Leu	Pro	Gly	Val	Leu	Ser	Ala	Val	Phe	Lys	Ser	Gly	Ile	Gln	Val
				245					250					255	
Asp	Leu	Glu	Ala	Arg	Asp	Phe	Glu	Gly	Leu	Thr	Pro	Leu	His	Thr	Ala
			260					265					270		
Val	Leu	Ala	Leu	Asn	Leu	Gly	Ala	Glu	Pro	Asn	Ala	Asp	His	Gln	Gly
		275					280					285			
Arg	Ser	Val	Leu	His	Val	Ala	Ala	Thr	Tyr	Gly	Leu	Pro	Gly	Val	Leu
		290				295					300				
Ala	Val	Ser	Gly	Gln	Val	Asp	Leu	Glu	Ala	Arg	Asp	Phe	Glu	Gly	Leu
305					310					315					320
Thr	Pro	Leu	His	Thr	Ala	Leu	Ala	Leu	Asn	Ala	Ala	Met	Leu	Pro	Ala
				325					330					335	
Ser	Val	Cys	Pro	Arg	Met	Gln	Asn	Ser	Gln	Ala	Arg	Asp	Arg	Leu	Thr
			340					345					350		
Cys	Val	Gln	Met	Leu	Leu	Gln	Met	Gly	Ala	Ser	His	Thr	Ser	Gln	Glu
		355					360					365			
Ile	Lys	Ser	Asn	Lys	Thr	Ile	Leu	His	Leu	Ala	Val	Gln	Ala	Ala	Asn
</															



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Val Leu Leu Leu Pro Arg Gly Asp Leu Arg Phe Val Asn Met Lys Ala  
                   500                  505                  510  
 His Gly Asn Thr Ala Leu His Met Ala Ala Ala Leu Pro Pro Gly Pro  
                   515                  520                  525  
 Gln Glu Ala Ile Val Arg His Leu Leu Ala Ala Gly Ala Asp Pro Thr  
                   530                  535                  540  
 Leu Arg Asn Leu Glu Gly Glu Gln Pro Val His Leu Leu Arg Pro Gly  
 545                  550                  555                  560  
 Gly Pro Glu Gly Leu Arg Gln Leu Leu Lys Arg Ser Arg Thr Ala Pro  
                   565                  570                  575  
 Pro Gly Leu Ser Ser His Leu Leu Arg Pro Gly Gly Pro Glu Gly Leu  
                   580                  585                  590  
 Arg Gln Leu Leu Lys Arg Ser Arg Ala Pro Pro Gly Leu Ser Ser  
                   595                  600                  605

<210> 5  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> motif

<221> VARIANT  
 <222> 5  
 <223> Xaa = Asp, Gly or Glu

<400> 5  
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<210> 6  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 6  
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21

<210> 7  
 <211> 21  
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 <213> Artificial Sequence

<220>  
 <223> oligonucleotide

<400> 7  
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21

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<210> 8  
 <211> 338  
 <212> PRT  
 <213> Unknown

<220>  
 <223> Murine

<400> 8  
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 Ser Leu Ser Leu Gln Asn Ile Met Gly Ser Pro Met Asn Thr Thr Gln  
 20 25 30  
 Leu Gly Lys Ser Phe Phe Gln Trp Gln Val Glu Gln Glu Ser Lys  
 35 40 45  
 Leu Ala Asn Ile Pro Gln Asp Gln Phe Leu Ala Arg Asp Gly Asp Gly  
 50 55 60  
 Asp Thr Phe Leu His Ile Ala Val Ala Gln Gly Arg Arg Ala Leu Ser  
 65 70 75 80  
 Tyr Val Leu Ala Arg Lys Met Asn Ala Leu His Met Leu Asp Ile Lys  
 85 90 95  
 Glu His Asn Gly Gln Ser Ala Phe Gln Val Ala Val Ala Ala Asn Gln  
 100 105 110  
 His Leu Ile Val Gln Asp Leu Val Asn Leu Gly Ala Gln Val Asn Thr  
 115 120 125  
 Thr Asp Cys Trp Gly Arg Thr Pro Leu His Val Cys Ala Glu Lys Gly  
 130 135 140  
 His Ser Gln Val Leu Gln Ala Ile Gln Lys Gly Ala Val Arg Ser Asn  
 145 150 155 160  
 Gln Phe Val Asp Leu Glu Ala Thr Asn Tyr Asp Gly Leu Thr Pro Leu  
 165 170 175  
 His Cys Ala Val Val Ala His Asn Ala Val Val His Glu Leu Gln Arg  
 180 185 190  
 Asn Arg Gln Ser His Ser Pro Glu Val Gln Asp Leu Leu Leu Arg Asn  
 195 200 205  
 Lys Ser Leu Val Asp Thr Ile Lys Gln Leu Ile Gln Met Gly Ala Ala  
 210 215 220  
 Val Glu Ala Lys Asp Arg Lys Ser Gly Arg Thr Ala Leu His Leu Ala  
 225 230 235 240  
 Ala Glu Glu Ala Asn Leu Glu Leu Ile Pro Leu Phe Leu Glu Leu Pro  
 245 250 255  
 Ser Cys Leu Ser Phe Val Asn Ala Lys Ala Tyr Asn Gly Asn Thr Ala  
 260 265 270  
 Leu His Val Ala Ala Ser Leu Gln Tyr Arg Val Thr Gln Leu Asp Ala  
 275 280 285  
 Val Arg Leu Leu Met Arg Lys Gly Ala Asp Pro Ser Thr Arg Asn Leu  
 290 295 300  
 Glu Asn Glu Gln Pro Val His Leu Val Pro Asp Gly Pro Val Gly Glu  
 305 310 315 320  
 Gln Ile Arg Arg Ile Leu Lys Gly Lys Ser Ile Gln Gln Arg Ala Pro  
 325 330 335  
 Pro Tyr

<210> 9  
 <211> 248

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&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 9

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Met Ala Thr Arg Ala Asp Glu Asp Gly Asp Thr Pro Leu His Ile Ala
 1      5      10
Val Val Gln Gly Asn Leu Pro Ala Val His Arg Leu Val Asn Leu Phe
      20      25      30
Gln Gln Gly Gly Arg Glu Leu Asp Ile Tyr Asn Asn Leu Arg Gln Thr
      35      40      45
Pro Leu His Leu Ala Val Ile Thr Thr Leu Pro Ser Val Val Arg Leu
      50      55      60
Leu Val Thr Ala Gly Ala Ser Pro Met Ala Leu Asp Arg His Gly Gln
      65      70      75      80
Thr Ala Ala His Leu Ala Cys Glu His Arg Ser Pro Thr Cys Leu Pro
      85      90      95
Ala Leu Leu Asp Ser Ala Ala Pro Gly Thr Leu Asp Leu Glu Ala Arg
      100      105      110
Asn Tyr Asp Gly Leu Thr Ala Leu His Val Ala Val Asn Thr Glu Cys
      115      120      125
Gln Glu Thr Val Gln Leu Leu Leu Glu Arg Gly Ala Asp Ile Asp Ala
      130      135      140
Val Asp Ile Lys Ser Gly Arg Ser Pro Leu Ile His Ala Val Glu Asn
      145      150      155      160
Asn Ser Leu Ser Met Val Gln Leu Leu Leu Gln His Gly Ala Asn Val
      165      170      175
Asn Ala Gln Met Tyr Ser Gly Ser Ser Ala Leu His Ser Ala Ser Gly
      180      185      190
Arg Gly Leu Leu Pro Leu Val Arg Thr Leu Val Arg Ser Gly Ala Asp
      195      200      205
Ser Ser Leu Lys Asn Cys His Asn Asp Thr Pro Leu Met Val Ala Arg
      210      215      220
Ser Arg Arg Val Ile Asp Ile Leu Arg Gly Lys Ala Thr Arg Pro Ala
      225      230      235      240
Ser Thr Ser Gln Pro Asp Pro Ser
      245

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&lt;210&gt; 10

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Unknown

&lt;220&gt;

&lt;223&gt; Murine

&lt;400&gt; 10

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Thr Ala Asp Ala Arg Ala Leu Leu Ala Gly Gln Arg His Leu Leu Met
 1      5      10
Ala Gln Asp Glu Asn Gly Asp Thr Pro Leu His Leu Ala Ile Ile His
      20      25      30
Gly Gln Thr Gly Val Ile Glu Gln Ile Ala His Val Ile Tyr His Ala
      35      40      45
Gln Tyr Leu Gly Val Ile Asn Leu Thr Asn His Leu His Gln Thr Pro
      50      55      60
Leu His Leu Ala Val Ile Thr Gly Gln Thr Arg Val Val Ser Phe Leu
      65      70      75      80

```

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Leu	Gln	Val	Gly	Ala	Asp	Pro	Thr	Leu	Leu	Asp	Arg	His	Gly	Asp	Ser	
				85					90					95		
Ala	Leu	His	Leu	Ala	Leu	Arg	Ala	Gly	Ala	Ala	Ala	Pro	Glu	Leu	Leu	
			100					105					110			
Gln	Ala	Leu	Leu	Arg	Ser	Gly	Ala	His	Ala	Val	Pro	Gln	Ile	Leu	His	
		115				120						125				
Met	Pro	Asp	Pro	Glu	Gly	Leu	Tyr	Pro	Val	His	Leu	Ala	Val	His	Ala	
	130					135					140					
Arg	Ser	Pro	Glu	Cys	Leu	Asp	Leu	Leu	Val	Asp	Cys	Gly	Ala	Glu	Val	
145				150						155					160	
Glu	Ala	Pro	Glu	Arg	Gln	Gly	Gly	Arg	Thr	Ala	Leu	His	Leu	Ala	Thr	
				165					170					175		
Glu	Met	Glu	Glu	Leu	Gly	Leu	Val	Thr	His	Leu	Val	Thr	Lys	Leu	His	
			180					185					190			
Ala	Asn	Val	Asn	Ala	Arg	Thr	Phe	Ala	Gly	Asn	Thr	Pro	Leu	His	Leu	
	195					200						205				
Ala	Ala	Gly	Leu	Gly	Ser	Pro	Thr	Leu	Thr	Arg	Leu	Leu	Leu	Lys	Ala	
	210					215					220					
Gly	Ala	Asp	Ile	His	Ala	Glu	Asn	Glu	Glu	Pro	Leu	Cys	Pro	Leu		
225					230					235						

&lt;210&gt; 11

&lt;211&gt; 235

&lt;212&gt; PRT

&lt;213&gt; Unknown

&lt;220&gt;

&lt;223&gt; Murine

&lt;400&gt; 11

Thr	Gly	Asp	Val	Lys	Met	Leu	Leu	Ala	Val	Gln	Arg	His	Leu	Thr	Ala	
1				5					10					15		
Val	Gln	Asp	Glu	Asn	Gly	Asp	Ser	Val	Leu	His	Leu	Ala	Ile	Ile	His	
			20					25					30			
Leu	His	Ser	Gln	Leu	Val	Arg	Asp	Leu	Leu	Glu	Val	Thr	Ser	Gly	Leu	
		35				40						45				
Ile	Ser	Asp	Asp	Ile	Ile	Asn	Met	Arg	Asn	Asp	Leu	Tyr	Gln	Thr	Pro	
	50					55					60					
Leu	His	Leu	Ala	Val	Ile	Thr	Lys	Gln	Glu	Asp	Val	Val	Glu	Asp	Leu	
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